

a carcass ply of cords extending between the bead portions through the tread portion and sidewall portions,

a breaker ply disposed radially outside the carcass ply and made of cords laid at an angle of from 10 to 35 degrees with respect to the circumferential direction of the tire,

a band ply disposed radially outside the breaker ply and made of cords whose cord angles are not more than 5 degrees with respect to the tire circumferential direction,

wherein

a) said cords of the band ply are aliphatic polyketone fiber cords each having

a tensile strength of not less than 9.8 g/d,

a standard elongation of not more than 5.0%, and

a dry heat shrinkage of not more than 6.0%, wherein the sum of the standard elongation and the dry heat shrinkage is not more than 9%,

a twist coefficient N is in a range of from 1500 to 2000, the twist coefficient N is the product $(Tx\sqrt{D})$ of the square root of a total denier number D of the cord and the twist number T (turns/10 cm) of the cord, and

said cords of the breaker ply are steel cords, and

said cords of the carcass ply are polyester cords.

9. Apneumatic tire comprising

- a tread portion,
- a pair of sidewall portions,
- a pair of bead portions,
- a carcass ply of cords extending between the bead portions through the tread portion and sidewall portions,
- a breaker ply disposed radially outside the carcass ply and made of cords laid at an angle of from 10 to 35 degrees with respect to the circumferential direction of the tire,
- a band ply disposed radially outside the breaker ply and made of cords whose cord angles are not more than 5 degrees with respect to the tire circumferential direction,

wherein

- said cords of the band ply are aliphatic polyketone fiber cords each having
 - a tensile strength of not less than 9.8 g/d,
 - a standard elongation of not more than 5.0%, and
 - a dry heat shrinkage of not more than 6.0%, wherein the sum of the standard elongation and the dry heat shrinkage is not more than 9%,
- a twist coefficient N is in a range of from 1500 to 2000, the twist coefficient N is the product $(T \times \sqrt{D})$ of the square

root of a total denier number D of the cord and the twist number T (turns/10 cm) of the cord, and

said cords of the breaker ply are steel cords,

said cords of the carcass ply are aliphatic polyketone fiber cords each having

a tensile strength of not less than 15.0 g/d,

a standard elongation of not more than 3.0%, and

a dry heat shrinkage of not more than 3.0%, wherein the sum of the standard elongation and the dry heat shrinkage is not more than 5.5%.

a 10. A pneumatic tire comprising

a tread portion,

a pair of sidewall portions,

a pair of bead portions,

a carcass ply of cords extending between the bead portions through the tread portion and sidewall portions,

a breaker ply disposed radially outside the carcass ply and made of cords laid at an angle of from 10 to 35 degrees with respect to the circumferential direction of the tire,

a band ply disposed radially outside the breaker ply

and made of cords whose cord angles are not more than 5 degrees with respect to the tire circumferential direction,

wherein

said cords of the band ply are aliphatic polyketone fiber cords each having

a tensile strength of not less than 9.8 g/d,

a standard elongation of not more than 5.0%, and

a dry heat shrinkage of not more than 6.0%, wherein the sum of the standard elongation and the dry heat shrinkage is not more than 9%,

a twist coefficient N is in a range of from 1500 to 2000, the

twist coefficient N is the product $(T \times \sqrt{D})$ of the square root of a total denier number D of the cord and the twist number T (turns/10 cm) of the cord, and

said cords of the carcass ply are aliphatic polyketone fiber cords each having

a tensile strength of not less than 15.0 g/d,

a standard elongation of not more than 3.0%, and

a dry heat shrinkage of not more than 3.0%, wherein the sum of the standard elongation and the dry heat shrinkage is not more than 5.5%,

said cords of the breaker ply are aliphatic polyketone fiber cord each having

- a tensile strength of not less than 15.0 g/d,
- a standard elongation of not more than 3.0%, and
- a dry heat shrinkage of not more than 3.0%, wherein the sum of the standard elongation and dry heat shrinkage is not more than 5.5%,

the total denier number of the cord is in a range of from 2000 to 4500 deniers, and

the twist coefficient is in a range of from 1000 to 2500.

11. The pneumatic tire according to in claim 9, wherein the aliphatic polyketone fiber carcass cords each have a total denier number D in a range of from 2000 to 4500 deniers, and a twist coefficient N is in a range of from 1000 to 2500, the twist coefficient N is the product $(T \times \sqrt{D})$ of the square root of the total denier number D and the twist number T (turns/10cm) of the cord.

12. The pneumatic tire according to in claim 10, wherein the aliphatic polyketone fiber carcass cords each have a total denier number D in a range of from 2000 to 4500 deniers, and a twist coefficient N is in a range of from 1000 to 2500, the twist coefficient N is the product $(Tx\sqrt{D})$ of the square root of the total denier number D and the twist number T (turns/10 cm) of the cord.

Q 13. A method of making a pneumatic tire provided radially outside a carcass with a band made of aliphatic polyketone fiber cords whose cord angles are not more than 5 degrees with respect to the tire circumferential direction, comprising

selecting a tensile strength from a range of not less than 9.8 g/d for the aliphatic polyketone fiber cords,

selecting a standard elongation from a range of not more than 5.0% and a dry heat shrinkage from a range of not more than 6.0% for the aliphatic polyketone fiber cords while checking the sum of the standard elongation and the dry heat shrinkage so that the sum is not more than 9%,

selecting a total denier number D per aliphatic polyketone fiber cord and a twist number T (turns/10 cm) of the cord while checking the product $(Tx\sqrt{D})$ of the square root of the

total denier number D and the twist number T so that the product $(Tx\sqrt{D})$ ranges from 1500 to 2000,

forming the band radially outside the carcass by using the aliphatic polyketone fiber cords.

14. A method of making a pneumatic tire provided with a carcass ply made of aliphatic polyketone fiber cords,

selecting a tensile strength from a range of not less than 15.0 g/d for the aliphatic polyketone fiber cords,

selecting a standard elongation from a range of not more than 3.0% and a dry heat shrinkage from a range of not more than 3.0% for the aliphatic polyketone fiber cords while checking the sum of the standard elongation and the dry heat shrinkage so that the sum is not more than 5.5%,

selecting a total denier number D per aliphatic polyketone fiber cord from a range of 2000 to 4500 deniers and a twist number T (turns/10 cm) of the cord while checking the product $(Tx\sqrt{D})$ of the square root of the total denier number D and the twist number T so that the product $(Tx\sqrt{D})$ ranges from 1000 to 2500,

forming the carcass ply by using the aliphatic polyketone fiber cords.

15. A method according to claim 14, wherein

the pneumatic tire further comprises a breaker ply made of aliphatic polyketone fiber cords laid at an angle of from 10 to 35 degrees with respect to the circumferential direction of the tire, and

the method further comprises

selecting a tensile strength from a range of not less than 15.0 g/d for the aliphatic polyketone fiber cords of the breaker,

al selecting a standard elongation from a range of not more than 3.0% and a dry heat shrinkage from a range of not more than 3.0% for the aliphatic polyketone fiber cords of the breaker while checking the sum of the standard elongation and the dry heat shrinkage so that the sum is not more than 5.5%,

selecting a total denier number D per aliphatic polyketone fiber cord of the breaker from a range of 2000 to 4500 deniers,

selecting a twist number T (turns/7.0 cm) of the aliphatic polyketone fiber cords of the breaker from a range of 1000 to 2500, and